



Department of Pesticide Regulation



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MEMORANDUM

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TO: Gary Sprock, Registration Specialist
Pesticide Registration Branch HSM-02013

FROM: Michael H. Dong, Ph.D., CNS, DABT, Staff Toxicologist
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DATE: April 23, 2002

SUBJECT: REVIEW OF LABEL AMENDMENT FOR USE OF BIRD SHIELD® BIRD
REPELLENT ON APPLES AND RICE AS ADDITIONAL CROPS

Under review is the label amendment (re)proposed (received January 9, 2002) by BSRC (Bird Shield Repellent Corporation) for a Section 3 registration of their product Bird Shield® Bird Repellent Concentrate (EPA Reg. No. 66550-1) used on additional crops. This repellent product contains 26.4% (by weight) methyl anthranilate (MA) as the active ingredient (AI), for which worker exposure has been assessed to address the uses registered to date (Dong, 1999a, 1999b, 2001). The proposed label amendment now adds uses on apples, rice, and wild rice.

Based on the following observations and considerations, this review concludes that there is *no* evidence at this time to support the claim of *insignificant* exposure from the anticipated additional use on rice. The proposed label retains essentially all use directions and all clothing and personal protective equipment (PPE) requirements for the current registered uses on cherries, grapes, turf, various non-fishbearing bodies of water, corn, sunflower, etc.

This review concurs that, for the proposed new use on apples, airblast applicators and handlers are adequately protected from wearing the required clothing and PPE since the proposed maximum label rate (1.15 lb AI/acre) for apples is the same as that for grapes and half of that for cherries. Reentry exposure is expected to be insignificant for apple harvesters, also due to the comparable maximum spray rate allowed. The dermal transfer rate of 4,000 ($\mu\text{g/hr}$ per $\mu\text{g/cm}^2$) typically assumed for tree fruit harvesters is lower than that (7,500) for grape harvesters (Dong, 1999c). Moreover, there does not seem to be any obvious reason supporting the argument that the MA dislodgeable foliar residues would have a longer half-life on apples than on grapes.

On the other hand, several unresolved issues have precluded the determination of exposure (in)significance for use of MA on rice or wild rice. First and foremost, it is not clear how the dietary intake of the treated rice should be estimated. There are adults and older children who eat more than 4 or 5 bowls of (though washed and cooked) rice a day; and under normal circumstances, the assessment of dietary intake is beyond the purview of this Branch. Second, there appears to be no dermal transfer rate used or assigned (U.S. EPA, 2000) for assessing the reentry exposure of workers harvesting rice by hand. Third, no specific equipment is given on the proposed label for applying the repellent to rice, or for pre-germinated seed treatments. In the submitted *efficacy* studies (Askham, 2000, 2001), the treated rice seed was planted in water field by hand broadcasting, for which the same PPE may not be applicable in that handling treated seed may not be considered as the same as handling the label-specified product *per se*.



References

- Askham LR, 2000. Rice Efficacy Field Trials, Cal/EPA Department of Pesticide Regulation Registration Document No. 52037-045.
- Askham LR, 2001. Efficacy of Bird Shield® Repellent to Control Bird Feeding on Rice Seed Planted in Water Field Trials, Cal/EPA Department of Pesticide Regulation Registration Document No. 52037-046.
- Dong MH, 1999a. *Review Document: Dislodgeable Foliar Residues (for Bird Shield® Repellent Concentrate)*. Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation, dated May 19.
- Dong MH, 1999b. Assumptions for and Estimation of Human and Worker Exposures to Methyl Anthranilate (Bird Shield®). Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation, dated August 18.
- Dong MH, 1999c. Human Pesticide Exposure Assessment – Diazinon (An Organophosphate Insecticide for a Variety of Agricultural and Non-Agricultural Uses). HS-1774. Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation.
- Dong MH, 2001. Review of Label Amendment for Section 3 Registration of Bird Shield® Bird Repellent used on Addition Crops. Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation, dated November 20.
- U.S. EPA (U.S. Environmental Protection Agency), 2000. Agricultural Transfer Coefficients. Policy No. 003.1. Health Effects Division Science Advisory Council for Exposure, Office of Prevention, Pesticides and Toxic Substances, Washington DC.

cc: Joseph P. Frank, D.Sc.